

AMENDMENTS TO THE DRAWINGS

Please replace drawing sheets 1, 2 and 6 with the attached Replacement Sheets, amending Figs. 2, 5 and 16.

REMARKS

Claims 61-64, 70-97 and 103-120 are pending in this application, with claims 61, 93 and 94 being written in independent form. By this Amendment, claims 65-69 and 98-102 are cancelled without prejudice or disclaimer. Claims 61-64, 71, 74-85, 94-97, 104, 108-111 and 113-118 are amended. No new matter is added.

I. Specification Rejections:

The specification is rejected under 35 U.S.C. § 112 for allegedly containing terms which are not clear, concise and exact although, no examples of the allegation are provided. However, in an effort to expedite prosecution of the Application, Applicants have reviewed the specification and amended accordingly. As such, withdrawal of the rejection is respectfully requested.

It is also alleged that paragraphs 22, 26 and 77-79 require detailed drawings to further the understanding of Applicants invention. However, paragraphs 22, 26 and 77-79 are all within the Summary of the Invention section of this Application. As such, the Examiner is respectfully directed to see the Detailed Description section of the Application and the corresponding Figures to aid in the understanding of Applicants invention. The Detailed Description in the corresponding Figures provides ample support for the claimed subject matter.

II. Drawing Objections:

The drawings are objected to for allegedly failing to show each and every feature recited in the claims. Specifically, it is requested that the drawings be amended to show a “flexible element,” a “stiff member,” “depressing means,” “rows/columns of detecting points for CCD,” and “transmitting means.” As claims reciting the flexible element, stiff member, and “depressing means” are canceled, the drawings need not be amended to show such features. Regarding the “rows/columns of detecting points for CCD,” the Examiner is directed to Fig. 13 and the last paragraph of page 26 of the specification. Regarding the “transmitting means,” Applicants respectfully request the Examiner to point out where such a feature is recited in a claim, as the Applicants do not believe such a feature is recited.

The drawings are also objected to for allegedly failing to comply with 37 C.F.R. § 1.84(p)(4) for allegedly using reference numbers to describe more than one element. However, it

appears that the Examiner is referring to the specification for support of the alleged designation of a reference number to describe more than one feature. As the specification is amended, Applicants submit that no inconsistencies exist between the drawings and the specification. Further, Fig. 16 is amended to point to a pen 1.

The drawings are further objected to for allegedly failing to comply 37 C.F.R § 1.84(p)(5) for allegedly containing reference characters not mentioned the specification. Figs. 2, 5, and 16 are amended in response to the objection. Accordingly, withdrawal of the objection is respectfully requested.

III. Claim Objections:

Claims 73, 76, 78, 79, 110, 111 and 116 are objected to. It is alleged that claim 73 is of improper dependent form for failing to further limit the subject matter of the previous claim. Specifically, it is alleged that claim 73 recites the same subject matter of claim 71. However, claim 73 and 71 claim different features and each depend from 61. As claim 73 and 71 clearly recite different features, claim 73 further limits the subject matter of the claim from which it depends. Claims 76, 78, 79, 110, 111 and 116 are amended in response to the objection. Accordingly, withdrawal of the objection is respectfully requested.

IV. Claim Rejections – 35 U.S.C. §112:

Claims 71-72 and 78-79 are rejected under 35 U.S.C. §112, first paragraph, and claims 64, 71, 74-78, 80, 83-85, 87, 104, 107 and 109 are rejected under 35 U.S.C. § 112, second paragraph. The rejection is respectfully traversed.

Regarding the rejection under 35 U.S.C. § 112, first paragraph, the Examiner is respectfully directed to page 6, lines 6-9 and page 16, lines 26-33 of the specification that teach that the direction toward the point of receipt of the light may be determined from two locations where triangulation may then be used for determining the position of the receipt of the light. Applicants note that triangulation is a well known technique that has been used for centuries, whereby the skilled person would have absolutely no problem in implementing it in a setup, such as that as shown, for example, in Fig. 11 of the present application where the mirrors 10 define the positions from which the directions are determined. Thus, the difference between the two receiving means is the position thereof as is required in triangulation. This is clear from, for

example, Fig. 11 (the two mirrors 10), and the mere mention of triangulation. The use of the receiving means is the determination of an angle, as is also clear from the use of triangulation. This may also be seen in Fig. 9 where a set up is illustrated to not only determine an angle toward the pen 1 but actually the distance thereto. The angle may be easily determined from the example set up shown in Fig. 9.

Regarding the rejection of claims 78 and 79, those claims relate to the use of parts of sensitive areas of a CCD for one purpose, and other sensitive areas for another purpose. It is clear from, for example Fig. 9, that what is required to determine an angle is merely a one dimensional sensor, e.g., a row of sensitive areas, where as to triangulate, two such rows are required. However, a 2D sensor may include a large number of rows, and what is illustrated in Fig. 12 for example, is how to direct light from one mirror (e.g., one determination) to one part of the CCD, light from the other mirror (e.g., the other required angle determination) to another part of the CCD and the light from a lens 22 to yet another apart of the CCD to provide an image (see page 18 of the specification). As such, it is believed that claims 71, 72, 78 and 79 are fully enabled by the specification.

Regarding the rejections of the claims under 35 U.S.C. § 112, second paragraph, the claims are amended in response to the rejection and therefore believe to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention.

Regarding claim 83, it is alleged that the claim recites “two lens means or mirror means.” or, claim 83 further defines the “receiving means comprising two lens means or mirror means” and therefore there is no need for antecedent basis for the new element recited in claim 83.

Regarding claim 85, it is alleged that “transporting means.” However, claim 85 does not recite such a limitation but rather recites means for “directing.”

Regarding claim 107, is it alleged that the claim fails to provide antecedent basis for “the at least one protector.” However, antecedent basis for the element is recited at line 2 of claim 107.

Regarding claim 109, it is alleged that the claim fails to provide antecedent basis for the “predetermined point.” Applicants respectfully refer the Examiner to claim 106 for antecedent basis of the feature.

V. Claim Rejections – 35 U.S.C. § 102:

Claims 61-64, 71-97 and 104-120 are rejected under 35 U.S.C. § 102(b) as being anticipated by US 5,502,568 to Ogawa et al. (“Ogawa”). The rejection is respectfully traversed.

Ogawa fails to disclose each and every feature recited in rejected claims. For example, Ogawa fails to disclose a touch pad, comprising ... a light transmissive element adapted to transmit received light inside of the light transmissive element.

Ogawa relates to an optical position detecting unit that includes an optical position pointer and a single photo detector. The optical position detecting unit detects the coordinates of a position pointed by the optical position pointer on the basis of the distance to the lighting emitting portion and a direction of incidence of light, both of which are detected by a single photodetector (col. 1, lines 13-25). In Ogawa, a cathode ray tube (CRT 1) includes a rectangular display screen 1a on its upper surface. The screen 1a is designed to function as an input surface for displaying inputted data and other necessary information, and also has an input surface of the optical coordinate input unit. This display screen 1a has an input surface on which a pen type position pointer 2 is movably operated by an operator. The pen type position 2 has a point-like light source 3 at its tip portion and is configured to be an optical pen type position pointer (col. 5, lines 39-58). At an upper corner of the rectangular display screen 1a a photodetector 4 is an optical position detecting unit. The photodetector 4 includes one image pick up unit, (for example a CCD linear image sensor) and one light receiving element (col. 6, lines 5-10).

As shown in Fig. 3 of Ogawa, the photodetector 4 includes a light-transmission pattern plate 21 that is disposed in the front of the photodetector 4. A light receiving element 22 and a CCD linear image sensor 23 are arranged side by side in the photodetector 4. A filter 24 is disposed in front of the light receiving element 22 and the CCD linear image sensor 23.

It is alleged in the Office Action that the light transmission pattern plate 21 of the photo detector 4 corresponds to the claimed light transmissive element. However, the light transmission pattern plate 21 of Ogawa is positioned within the detector 4 and does not function as a light transmissive element as recited in the rejected claims. Rather, in Ogawa, the pointer 2 which acts as a light emitter is adapted to forward the light along the top surface of the screen 1a of the CRT 1 toward the detector 4 that is disposed in an upper corner of the device. For example, as shown in Figs. 1 and 2 of Ogawa, the pen 2 must be angled such that the light transmitted therefrom is receivable by the detector 4. The light from the light source 3 that acts

as an emitter tip is transmitted through the air to the detector 4. In contrast to Ogawa, as may be seen in an example embodiment illustrated in Figures 1-3, 11, 12 and 14, light is transmitted into the light transmissive element at a particular position and the position is then determined. Thus, as recited in the rejected claims, the light transmissive element is adapted to transmit received light inside the light transmissive element. In contrast, the touch pad 1a (the screen of Ogawa) does not receive light therein, rather, the light is received by an external photo detector 4. Accordingly, Ogawa fails to disclose each and every feature recited in rejected claims. Thus, withdrawal of the rejection is respectfully requested.

VI. Claim Rejections – 35 U.S.C §103:

Claims 65-70 and 98-103 are rejected under 35 U.S.C. § 103(a) as being obvious over Ogawa in view of US 5,459,461 to Crowley et al. (“Crowley”). The rejection is respectfully traversed.

Claims 65-70 and 98-103 are allowable for their dependency on their respective base claims, as well as for the additional features recited therein. Further, as claims 65-69 and 98-102 are cancelled, the rejection of those claims is moot. The rejection of claim 70 and 103 is respectfully traversed.

To overcome the admitted deficiencies of Ogawa for failing to disclose or suggest the subject matter recited in claims 70 and 103, the Office Action seeks to combine the teachings of Crowley in an effort to overcome the admitted deficiencies. However, Crowley relates to a inflatable keyboard made of a flexible polymeric material. The upper layer of the inflatable keyboard may be made of a molded keypad having formed keys. The upper layer may be made of a clear material and array of solar cells may be disposed thereunder to provide electric energy to the system from the keyboard itself (col. 1, lines 60-66).

It is alleged in the Office Action that Crowley, at col. 1, lines 60-66, when combined with Ogawa renders the rejected claims obvious. However, merely providing a reference that discloses a clear material so that solar cells may be exposed to sunlight, fails in anyway to disclose or suggest the additional features as recited in claims 70 and 103. Moreover, the Office Action also fails to provide any motivation or suggestion as to why one in ordinary skill in the art would seek to modify Ogawa to include the clear polymeric material for the inflatable keyboard that is taught by Crowley. Further, neither of the references provide any teaching or suggestion

as to how one would modify the teachings of Crowley to be combinable with those of Ogawa. Thus, an extraordinary amount of supplemental experimentation would be required even if one were motivated to do so. As the combination of references, whether considered alone or in combination, fails to disclose or suggest the additional features recited in claims 70 and 103, withdrawal of the rejection is respectfully requested.

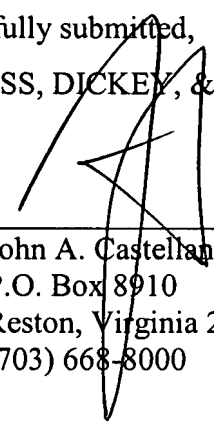
CONCLUSION

In view of the above, Applicant earnestly solicits reconsideration and allowance of all of the pending claims.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,
HARNESS, DICKER, & PIERCE, P.L.C.

By: 

John A. Castellano, Reg. No. 35,094
P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

JAC/JWF:lmg